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On the Cultivation of the Peach Tree, delivered before the Horticultural Society of Detroit, August 8, 1848, by Rev. Geo. Duffield, D. D.

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Gentlemen of the Horticultural Society of Detroit:—I regret that want of time and numerous engagements have prevented me from preparing an article more worthy of your attention than that which is at present submitted to you. The practical value and importance of the subject in our new and flourishing State, however, will, I trust, bespeak for it the consideration which its merits may fail to deserve.

In the various applications of human indurtry for the cultivation and improvement of the earth, in horticultural and agricultural respects, it is of importance to pay special attention to those fruits and productions which may be best adapted to our climate and to the varieties of our soil, and most certain to reward the cultivator for his expense and labor. The substantial and staple fruits and grains have been so successfully cultivated as to prove that Michigan stands unrivalled in both respects. The apple tree will bear comparison with any produced either in the Eastern or Western States. Its importance as a source of wealth has been estimated by some of our farmers, whose flourishing orchards give promise of their being soon amply repaid for their toil and patience. But it is to be regretted that another, equally valuable and more delicious, though short lived fruit, has not received the attention and care it merits. I allude to the peach, which being of much more rapid growth, yields a quicker return for the labor bestowed upon it. My object this evening is to direct your attention to the peach, as a fruit deserving more extensive cultivation in our State.

It is not known what country claims to have given origin to this exquisite fruit, but as it bears the Botanical name of Amygdalus Persica, it is commonly reported to have been derived from Persia, whose surname it bears.

This fruit affords a remarkable illustration of what cultivation will do, in improving the qualities, and in changing the very character of fruits which originally scarcely deserved the name. As far as its history can be traced back, it appears to have existed originally in its native state in the form of the bitter almond, with a dry skin, without pulp, and parting like the shell of the hickory nut. This shell contained a poisonous substance which was used by ancient barbarians to render their arrows envenomed, and more fatal in the wounds they inflicted. It was for this purpose introduced into Persia, where and in China, by cultivation and transplanting it was improved. It was brought from Persia into Italy during the reign of the Emperor Claudius, whence we have obtained the delicious fruit we now enjoy, not only divested of its poisonous qualities, but possessing medicinal virtues, rendering its judicious use an effectual cure of certain forms of dyspepsia and dysentery.

The Amygdalus Persica with all the serratures of the leaves acute, and the flowers sessile and solitary, has two varieties—the peach tree with downy fruit, and the nectarine with smooth skinned fruit. The apricot, and the nectarine also, though generally classed as just stated, are both natural hybridatious between the peach and the plum—the former having the downy fruit of the peach and the plumb-like pit, and the nectarine the smooth skinned fruit of the plumb and the peach-like pit.

A good peach possesses these qualities: the flesh is firm, the skin is thin, of a deep bright red color next the tree, and of a yellowish green or white from it, the pulp may be either yellow, white, or even of a greenish hue, but the fleshy part must be thick, full of highly flavored juice, the stone small, and the parts adjacent to it devoid of any bitter taste and astringent property. Those varieties, the flesh of which separates readily both from the skin and the stone, are the proper pêches of the French, and are by our gardeners, after the manner of the English, generally termed free stones, tho' by others the peach appellation is given exclusively to them. Those with a firm flesh, to which both the skin and the stone adhere, are termed *pavies* by the French, but by our gardeners clings or cling stones. In England the preference is generally given to the free stones, pavies being chiefly planted in forcing houses, where the climate can be made. The latter require more shelter and better seasons to bring them to perfection than the former. In countries of better and more suitable climate, as in France, and our middle and southern and most of our western States, the pavies or cling stones are preferred by connoisseurs, but the market is most abundantly supplied, and the general taste most gratified with the peach or free stones.

The varieties of the peach are very numerous, and continually new species are produced, sometimes by accident, and sometimes by design. Mr. Knight, gardener of King George the Third, who distinguished himself as a most indefatigable and excellent horticulturist, produced several new peaches of the most promising qualities at his seat in Downton in Herefordshire, and expected by persevering in his experiments, to introduce varieties which would be adapted to the climate of Great Britain, where they are cultivated with complete success only in the hot houses of the nobility and gentry. After due precautions to bring his trees, which were small ones planted in large pots, to the highest state of health and vigor, he impregnated the pistil of one with the pollen of another. Only three peaches were suffered to remain on each tree; from sowing the stones of these, he obtained his new varieties. These were what are called the *Acton Scott peach*, a cross breed from the noblesse and red nutmeg, which ripens early, and uniformly attains perfection; is juicy and sweet, with a rich flavor, the skin white, the tree an abundant bearer and not subject to mildew, maturing about the middle of August, and calculated to succeed in many cold and unfavorable situations, where the more delicate varieties would fail; and the *Spring Grove peach*, with firm flesh but not hard, color bright yellow and dark red, melting in the mouth, resembling the nectarine in consistence as well as taste, having a remarkably rich, brisk, and vinous flavor, the stone parting readily from the flesh, which is of a greenish cast. Attempts were made with hope of success, to grow these peaches in Scotland, in the garden of Sir Geo. Makenzie, at Coul, in Ropshire, where they were planted against a south wall. But the fruit has not been rendered indigenous to high northern latitudes. Nor can it be, for the nature of the tree itself forbids it. The blossom, bud, and embryo fruit are developed perceptibly to the naked eye, in the germ, early in the fall, and lie so near the surface, with such a thin pellicle for protection, that whenever the temperature of the atmosphere in the winter falls to 14° below zero, it is sure to be destroyed. This circumstance should be carefully attended to by those who cultivate the peach in our country, in the selection of their grounds. Our own climate along the banks of our beautiful river, is very favorable in this respect, for I have known the theremometer to fall to that point only once in nine years, and the season following there was a total failure of the peach crop. Another circumstance of importance to be observed in this connection is the danger incident to the hoar frost and sleet or freezing rains that coat the limbs of the trees, bringing the severe cold in close contact with, and incasing the tender germ. In Maryland, Pennsylvania, parts of Virginia and Ohio, and in New Jersey, New York and further east, where such freezing rains are apt to occur in the early part of winter, the peach crop is sure to suffer injury. The severe winter weather commences generally in this State from the 18th to the 25th of November; sometimes it occurs very suddenly, and if it should be accompanied with freezing rains before the germ shall have had the sap fully driven back, and while it is yet tender, the peach is sure to suffer. A freezing rain any where in November and December will do much injury, but after that the fruit will sustain less from the same cause, and may escape, provided the ice be not too thickly coated, or remain too long upon the limbs. I have had occasion to compare the climate of the Atlantic slope in the middle States with that of our peninsula, and have observed that during a period of 20 years the peach crop in the latitude of Pennsylvania and east Jersey, would average about three in five years, while along our own river the failure has been about once in five years during a period of ten years' observation. This remark will not hold true in reference to the interior of our State, where the cold is apt to be more intense, as indicated by the fall of the mercury in the thermometer. The borders and near vicinity of the smaller lakes in the interior, however, present much more favorable situations, equal with those along our own river, for the cultivation of this and other fruit, than do the plains and districts not intersected by water. Such situations, if generally selected, would warrant a return for the expense and labor bestowed in the cultivation of this and other fruits; and they are sufficiently numerous to insure abundant crops and abundant supply, not only for home use, but for exportation, so as to render the peach a source of great profit to our farmers.

In Maryland, Delaware and New Jersey the peach has long been cultivated. Thousands of acres are devoted to this crop. During the former century, and very soon after the introduction of the peach into this country, in 1680, it was customary to plant extensive orchards with this tree, whose fruit was devoted to a two-fold purpose—the feeding and fattening of hogs, and the distilling of a fiery, deadly liquor, the fiercest and most pernicious of all alcoholic and poisonous beverages so lamentably and yet extensively used, which liquor bore the name of peach brandy. The stones were collected and sown in the nursery, and the trees, when of two or three years' growth, were planted in the orchard and allowed to grow indiscriminately without pruning. Among a large number of trees thus raised, there would usually be a few having larger fruit and of a better description, which were reserved for eating; but the rest bore the general name of hog peach. The clings were generally sweeter and better flavored than the free stones, which gave occasion to Mr. M'Intosh, in his work called "The Orchard," ig-

norantly to remark that "the Americans usually eat the cling stones, while they reserve the free stones for the pigs." For nearly a century the peach was thus carelessly cultivated. Orchards attained to great age, and I have seen, when young, ancient trees from the days of my grandsires, with trunks of large sizes bearing their fruits undisturbed by the ravages of the borer or the yellows, which have proved so fatal during this century.

The yellows is a disease which has of late years been arrested and subdued: that is referred for its origin to the exhausted state of the old grounds used for peach orchards, and the continued propagation of seedlings from the stones of trees debilitated by age and want of cultivation. It is peculiar to the United States, and commenced its ravages in the early part of this century in the neighborhood of Philadelphia, whence it spread like some contagious disease from tree to tree until in 1814 it had destroyed a considerable part of the orchards in New Jersey, and gradually and slowly extended itself along the banks of the Hudson, nothward and westward in New York, and eastward into Connecticut, and became known in the warmer parts of New England. Dr. Von Mons affirms that the more frequently a tree is reproduced *continuously* from seed, the more feeble and short lived will be the seedling, and whence others who have carefully examined into the character of this disease, have been led to the opinion that the yellows is referable to the constant sowing of an enfeebled stock of peaches, and that poor soil and over bearing will sooner or later develope it. In this opinion Downing concurs, who recommends as a remedy for it, the utter extermination of any and every tree attacked by it, the careful selection of seed for planting, from healthy trees, and a judicious system of what is called shortening in pruning from the first bearing year, so as to prevent exhaustion by over bearing.

The ravages of this disease in Pennsylvania, New Jersey, and New York at one time excited fears lest this delicious fruit would be lost altogether; but the attention, care, and science which it called forth in its cultivation, have conquered it, and by the production of new and splendid varieties adapted to the climate and by judicious care, have restored to New Jersey, Pennsylvania, Delaware, Maryland and Virginia their extensive, luxuriant, and profitable peach orchards, in which Ohio and Kentucky are beginning to rival them.

As a source of wealth the cultivation of the peach even surpasses the apple. Large fortunes have been made in west Jersey, east Pennsylvania, and Delaware from the peach alone.—It was no uncommon thing for the successful cultivator to obtain $10,000 per annum, as the clear avails of his peach orchard. To give an idea of the extent of this business in Delaware and the region south and east of Philadelphia, and in New Jersey, it is sufficient to state that thousands of acres are devoted to the cultivation; and sloops, schooners, steamboats and wagons innumerable are engaged in the transportation of this fruit. Many growers have from ten to thirty thousand trees, and send as many bushels in good seasons to market, which bring prices varying from thirty cents to four dollars per basket containing 3½ pecks. A writer in the Boston Cultivator describes his visit to the Raybold's orchards, near Delaware city, in Delaware State, during the peach season, at which place he says, where he arrived at 11 o'clock A. M., he could with difficulty pass along the wharf, for the rows of baskets three tiers in height extending 100 yards, flanked with carriages from the six ox and six mule wagon, counting their 125 baskets each, to the single horse cart or dearborn with its score or two, awaiting their turn for unloading, reloading with empty baskets, and driving furiously back for more. A sloop was just loaded, taking off 1,230 baskets—1,000 more were placed on a steamer, 3,190 on another, making the total shipment of one day 5,420 baskets, which, then in the middle of peach harvest, sold for from 16 to 30 cents per basket at the landing, according to their quality.

From the books of Major Reybold and his sons he ascertained that by the 29th of August they had sent to market 63,334 baskets—the number of baskets employed per transit was from 40 to 50,000—the number of acres of orcharding, 1;090; and of trees, 117,720. On the 30th 3,000 baskets were forwarded, and on the 31st 4 075. Three steamers were then loading with peaches at the same time, and delivering some 16.000 empty return baskets.

It is impossible for any one to form a conception of the extent and activity of this business without witnessing it. The markets of Philadelphia, New York, and Boston afford abundant demands for the supply. We give the following, taken from the South Western Farmer, as a fair specimen of the cost and profit of the cultivation of this fruit still farther south:

Fruit trees would cost on an average, delivered on the farm, 40 cents each. If planted 25 feet apart each way, 69 trees, worth $27 60 would be required to the acre. The cost of cultivation, interest and rent of land will be paid for the first three years by the corn crop. By the third year the fruit will begin to yield, and the profit is estimated from its crop alone.

35 acres of land, worth, say $10 per acre,	$350,	Int. 8 pr et,	$28 00
Fruit trees, $26 60 per acre,	82°,	do.	66 24
A pair of choice mules and wagon,	300,	do.	24 00
Hire of six hands, $150 each'	900,	do.	72 00
Food, clothing, doctor's bills, taxes,	240,	do.	19 20
Ploughs, tools, and wear of gear, mules, &c.,	100,	do.	8 00
Making in all,	$2,718		$217 44

To meet this expense and pay interest, the following is put down as very moderate yields and prices from sales and hireing hands for other purposes when not wanted in winter.

By one bushel of fruit only from each tree of the best, at only $1,	$2,070 00
Food for hogs at $5 per acre, the selected fruit only gathered,	150 00
Deduct hire of hands for months of November, December, January and February, at $10 per month,	240 00
Makes a total cash return of nearly	$2,460 00

Thus the first year of fruit would reimburse the entire expenditure. This is an estimate made from data, where slave labor, that curse to the State and soil wherever it exists, is employed, which can never compete with that of the free man. Who does not see from the above facts that the cultivation of the peach may be made a source of wealth in this State. The climate is favorable—more so than East Pennsylvania. The soil also exists that is suited for it. The stiff clay around our city is not as favorable as the loose, loamy, and sandy soil in the interior. Detroit itself will for many years furnish a market that would itself be an inducement. Buffalo cannot cultivate the peach successfully, and although the vicinity of Rochester presents fine soil and climate along the ridge for extensive orchards, the supply is not more than adequate to meet the demand of that city. Many advantages of economy might be adopted by our Michigan gardeners and farmers disposed to form their orchards, by selecting the proper varieties and procuring their trees from the different nurseries already established: in a very short time they would be able to supply the market. The expenditure of a small sum in the improvement of budded trees, grown in the vicinity, would be amply repaid in a short time. But we dwell not on inducements. Judgment and care are necessary in the selection of the varieties proper to our climate. The early kinds or those that ripen in August and the beginning of September should be preferred. Of the free stones with pale flesh, preference may be given to the Strawberry, the Acton Scott, the Bellegarde or Royal George, White Magdalen, Coolleges favorite, of the early rare ripe class, Brevoorts' Morris, Prince's Rare ripe, the Emperor of Russia, the Gros Mignone or Royal Kensington, the early York, Teton de Venus, George the 4th, Morris' red and white Rare ripe, and the Noblesse.

Of the free stones with yellow flesh, the different varieties of Melocoton, especially Crawford's early and late, Red Cheek, Columbia, and Barnard's yellow Rare ripe are deserving of particular attention. And of the cling stones the Blood or Claret, the Catharine, the early or Smith's Kensington, the Incomparable, the large white or Selby's cling, the old Newington, the old Mixon, the Monstrous cling, the Orange, the Lemon and the Heath.

Most of them if not all and other varieties are to be had in the nursery of our worthy neighbor and member of our Society, Mr. James Dougal, at the rate of $20 per hundred. Also of Hastings & Hubbard, and in our own vicinity, from the nurseries of our enterprising members, Messrs. Holmes, Ford, Adair, and B. Hubbard.

I had intended to have noticed particularly the best mode of planting and treating the soil as well as the diseases of the peach tree, especially the crisp and the decay produced by the borers, together with efficient remedies. But having trespassed already too long on your attention, will conclude by remarking that in the vicinity of our own city great care should be taken in planting the peach tree, to see to it, that the clay soil does not overlie a sand barren, which is very often the case, and in very wet springs will be sure to cause the death of the tree even when it has been thought by ordinary draining there was sufficient protection. The unexpected death of fine flourishing young peach trees after several years' growth, and soon and suddenly after having bloomed luxuriantly, which occurred in the spring of 1847 in different places in this neighborhood is to be referred to this cause. Deep draining, so as to carry the water off from below the roots of the tree, or making the sand and the clay to change places will prevent such casualties. With the attention and interest that I trust our Society will secure to this as well as kindred subjects, may we not hope soon to see our markets furnished with this most luscious fruit, and our gardeners and farmers amply rewarded for their toil and pains?

Prof. Mape's Experiment in Farming.

The value of Science to agriculture is well set forth in the following description of the Experimental Farm of Professor MAPES, in this vicinity, which is furnished the National Intelligencer by a New York correspondent:—*Newark Adv.*

"Science is gradually making its way to the farm-house, and lending its powerful and important aid to agricultural pursuits. As an incentive to others to 'go and do likewise,' I will state very briefly what a practical chemist is now doing in this vicinity in experimental farming. Professor Mapes, for many years a resident in this city, and well known as a good chemist and scientific man, concluded last fall to turn his attention to agriculture. For this purpose he purchased a small farm of about forty acres in *New Jersey*, between two and three miles south-west of *Newark*. He is now in the midst of his first season, and yesterday I went out to his place in company with some of the members of the American Institute, to see what sort of a start he had made in his new pursuit. The result was highly gratifying, and left the impression that this little experimental farm would give a valuable stimulus to the agriculture of the country. The basis of the soil is principally a disintegrated sandstone with a mixture of clay. The farm had been occupied for some years past by a mechanic, who had paid but little attention to it, and was in a low state of cultivation

thus making it a fair field to test the results of chemical farming.

On our arrival we were seated awhile in the Professor's snug Parlor, where he gave us a general account of the farm, the nature of the soil, the sources and the mode of procuring, preparing, and applying manures, the effects of various chemical actions in the composition of manures, and their influence upon vegetation. In short, it was an admirable chemical lecture applied to agriculture. He then took us over the farm to see what he had done and what he was preparing to do. At the barn we found two yoke of the handsomest and most powerful working oxen I have ever seen.

"Where did you find such cattle?"

"I called a man to my aid who was a first-rate judge of animals, and told him to go out and look for them, directing him to bring me two pair of the best oxen he could find between New York and Bangor, regardless of the expense."

The result was, that he brought back these cattle at about two hundred dollars a yoke, 'and cheap enough at that,' said the Professor. One pair weighed about 3,800 pounds. We then went into the field to see them plough, and the ease with which they pulled the ploughs through the soil seemed more like the work of a powerful steam-engine than of animal power. The first yoke cut a furrow sixteen inches in depth, the next followed with a subsoil plough in the same furrow, cutting and loosening the earth sixteen inches below the first furrow. The Professor says deep plowing is very important for large crops. Some of his plowing is thirty-six inches deep. His system of preparing and applying manures is scientific and important, and judging from present appearances, he will produce remarkable results. The science of a succession of crops in the same season, without impoverishing the soil, is of vast importance. The Professor says that from a single acre he shall take off this season eight hundred bushels of potatoes, three thousand five hundred cabbages and six hundred bushels of turnips, which must be worth five or six hundred dollars at the lowest market prices. His crop of cabbages this season, he calculates at eighty thousand heads. He has a new variety of potatoe, which he calls the nutmeg potatoe, of which he expects to raise this season eighteen hundred bushels, which will be disposed of for seed at one dollar a bushel. He calculates that he will have a hundred and twenty thousand nutmeg melons for market this season, which certainly ought to average two cents a piece, which, at that rate, would yield twenty-four hundred dollars. There is on the farm a great variety of other vegetables and crops to which I make no reference.

Unlike most farmers, he does not leave a strip of waste along by the side of his fences, but cultivates every inch snug to the fence. Against each post in the fence he sets out a fruit tree, and midway between the trees a grape vine, which, as it runs and spreads, will rest on the fence. In this way he will soon have three miles of grape vines and fruit on ground which ordinary farmers would let run to waste. He uses his farm like a giant machine of wonderful powers, if properly and scientifically handled. He employs upon it about twenty hands, but says in high state of cultivation gives employment to eighty.

Goldsmith says, in that sweet poem, the "Deserted Village"—

"A time there was, ere England's grief began,
When every rood of ground maintained its man."

But I think that Professor Mapes is in a fair way of proving that in this country a rood of ground may be made to maintain quite a number of men; and I hope it will do much to convince our farmers that scientific farming is of more importance to them than great number of acres."

The Copper Region--Singular Discovery.

A correspondent of the Buffalo Express, writing under date of June 14, from Ontonagon, Lake Superior, says:

Mr. Knapp, of the Vulcan Mining Company, has lately made very singular discoveries here in working one of the veins, which he lately found. He worked into an old cave which has been excavated centuries ago. This led them to look for other works of the same sort, and they have found a number of sinks in the earth which they have traced a long distance. By digging into those sinks, they find them to have been made by the hand of man. It appears that the ancient miners went on a different principle from what they do at the present time. The greatest depth yet found in these holes is 30 feet—after getting down to a certain depth, they drifted along the vein, making an open cut. These cuts have been filled nearly to a level by the accumulation of soil, and we find trees of the largest growth standing in this gutter; and also find that trees of a very large growth have grown up and died, and decayed many years since; in the same places there are now standing trees of over three hundred years' growth.

Last week they dug down into a new place, and about twelve feet below the surface found a mass of copper that will weigh from eight to ten tons. This mass was buried in ashes, and it appears they could not handle it, and had no means of cutting it, and probably built fire to melt or separate the rock from it, which might be done by heating, and then dashing on cold water. This piece of copper is as pure and clean as a new cent; the upper surface has been pounded clear and smooth. It appears that this mass of copper was taken from the bottom of a shaft, at the depth of about thirty feet. In sinking this shaft from where the mass

now lies, they followed the course of the vein which pitches considerably; this enabled them to raise it as far as the hole came up with a slant. At the bottom of the shaft they found skids of black oak, from eight to twelve inches in diameter—these sticks were charred through as if burnt; they found large wooden wedges in the same situation. In this shaft they found a miner's gad and a narrow chisel, made of copper.

I do not know whether these copper tools are tempered or not, but their make displays of good workmanship. They have taken out more than a ton of cobblestones, which have been used as mallets. These were nearly round, with a score cut around the centre, and look as if this score was cut for the purpose of putting a withe round for a handle. The Chippewa Indians all say that this work was never done by Indians. This discovery will lead to a new method of finding veins in this country, and may be of great benefit to some. I suppose they will keep finding new wonders for some time yet, as it is but a short time since they found the old mine. There is copper here in abundance, and I think people will begin to dig it in a few years. Mr. Knapp has found considerable silver during the past winter.

Draining of Marshes and Wet Arable Lands.—By being drained, marshes which are now unsightly sources of disease, and as unproductive as unhealthy, may be converted into beautiful meadows, at once the fountains of wealth and the guaranties of health. All who have such lands upon their estates, should, at once, set about to transform them into arable soils—the improvement may cost time, labor and money, but it will pay 20 per cent upon the outlay in products, besides adding largely to the intrinsic value of such estates.

F. Falkland, Esq., of England, the author of several agricultural works of merit, thus sums up his views upon the importance of draining.

"In conclusion it should be observed, that every attention which can be paid to the preparation and application of manures will be ineffectual in rendering soils fertile, unless due regard be given to the removal of excess of moisture by draining, when needful. When a soil is saturated with water, the air is excluded from the roots of the plants. and prevented from acting upon the manure; while the low temperature produced, by continued evaporation from the surface, has an additional powerful effect in retarding the progress of vegetation."

"To lay manure upon wet soils, is, in truth, to throw money away; but were draining universally effected, the whole of the now unproductive soil of the country would, to a vast extent, be rendered capable of receiving the benefit of the numerous modes of fertilizing it. Its returns are immediate, as well as compensative; and to hesitate to drain the land, is to hesitate to confer a benefit upon one's self, of which a strong proof has been lately brought forward in a statement of the profit resulting from the drainage of 467 acres, and the employment of the drain water over 89 acres of land, on the estate of Lord Hatherton, in Staffordshire—affording a clear annual interest on the outlay of full thirty-seven per cent."

Don't raise Wool Enough.—The American Farmer contains a letter from Samuel Lawrence, Esq., of Lowell, to H. S Randall, of Cortland, N. Y., on the subject of wool growing.

Mr. Randall enquires of him whether the present home demand is supplied, and what countries we export wool to?

Mr. L. answers that there is not enough annually raised in the country by *ten millions* of pounds, to meet the demands of the manufactories. He also says that this country will not export wool regularly for fifteen years, for the reason that the consumption will increase as rapidly as the production. I can point out articles made of wool now imported, which will require *thirty millions* of pounds, of a medium and fine quality, to support the consumption.—After stating that the business of manufacturing wool in the country was never on a better basis, inasmuch as the skill and capital engaged is such as to defy foreign competition, he urges Mr. R. to keep the wool growers steady to the mark. Aye, that's it—steady to the mark—and when they get up to the mark, as it regards number and quality of sheep, off comes the tariff, in comes foreign wool from the "*four corners*" of the earth, and down goes the prices so low that American farmers cannot compete with the foreign influx. Samuel Lawrence and others may say what they please about the mark, and they may fill the boundless prairies of the west, and every hill and mountain in the Union with sheep and he can import it from the plains of South America and elsewhere, cheaper than it can be raised here, and unless more protection is given he *will* do it. If he really wishes the United States to supply the manufactories with wool, the Custom House door must be shut a little tighter than it is now.—*Maine Farmer.*

Asparagus.—A correspondent of Downing's Horticulturist raises shoots of Asparagus, which he says are, without exaggeration, as large as his hoe handle, and perfectly tender and succulent, by this method;—One part hen dung, to 40 parts of stable manure, are spread two inches thick in autumn, and forked in. The next spring this is turned over slightly, and a coating of a quarter of an inch of salt added. This dissolves by rain, and kills every weed, while it promotes a vigorous growth of Asparagus. He cuts his Asparagus when six inches high, wholly above ground, and then it is perfectly tender.—*Farmer and Mechanic.*

XUM

To Boys and Girls—Never tell a whole lie, or half a lie, or a quarter of a lie, or any part of a lie. Many boys, who know well enough what a sneaking, dirty thing it is to lie, will yet twist the truth, or deceive a little bit. This is about as bad—and a good deal more cowardly than a plump falsehood. If a boy does something wrong, either through ignorance, carelessness, or accident—and then tells one half truth and one half lie about it—he might almost as well have told the whole untruth, that he did'nt do it at all. Now see how the spirited manly true-hearted clear-tongued boy will do, after an error: he resolutely determines to acknowledge it without being afraid of any body's anger—to tell it just as it was. I never in my life knew any one to be injured by telling the truth in this way; but I have seen many a boy and man too, who was looked upon with contempt, and thought poorly of, because he would tell sneaking lies, or half lies, or quarter lies. The worst sort of untruths—those which are deliberately made up—stories about people—or little stories magnified into big ones—prove the teller of them to be a worthless, impure, and mean person. The liar is indeed despicable both to God and good men. On the other hand nothing is more beautiful than a strictly truth-telling young person—one who never varies from the truth—who is open, candid, and above deceit. To become so, a boy should strive hard—should determine to become so—and he *will* become so. Besides, it is so easy always to speak the truth—and so very hard to arrange a plausible falsehood—which even then will in all likelihood be found out nineteen times out of twenty.

The State Bank of Ohio has becom the most important money institution on this continent.—With thirty-seven branches, covering the whole State—all bound together by one common interest, and in all important respects all goverened by one head—the Board of Control. It now issues five and a half millions of currency—sustains an accommodation line, in the way of notes and bills discounted, of seven millions; holds two millions of specie, and has a cash capital of $3,400,000.

Energy and Mind.—Energy is every thing. How mean a thing is man with little motive power? All the abilities nature has given him lie useless, like a great aud mighty machine, ready at every point for useful action, but not a wheel turns for want of a starting power? A great man is like a great machine. He has a great power to set in motion the various and immense projects which he has in his hand; little motives can neither start nor stop him, they may set in motion the powers of an ordinary man, and render him a respectable, nay, even a beautiful piece of mechanism, but never a magnificent one.

Yet there is one thing which renders man supremely above the machine. By the working of his own mind he can improve and exalt himself; by directing his eye to what is great and good, he may become so. If, then, we can become what we wish to be, what high objects should we aim at, and what resolute and energetic efforts should we be ever making to attain them?

Influence of Kindness on the Horse.—The Turkish horse is a mixed off-spring from the Arabian and the Persian breeds, and from some kindred varieties. It is as gentle and tractable as the Arabian, but neither so fleet nor so vigorous.—Busbequies, who went as ambassador to Constantinople in the 17th century, says:—"There is no creature so gentle as a Turkish horse, nor more respectful to his master, or the groom that dresses him. The reason is, because they treat their horses with great lenity. The countrymen in Pontus stroke them, bring them into their houses, and almost to their tables, and use them even like children; and the grooms frequently sleek them down with their hands, and never use a cudgel to bang their sides but in cases of necessity. This makes their horses great lovers of mankind; and they are so far from kicking, wincing, or growing untractable by this gentle usage, that you will hardly find an ill-tempered horse amongst them."

Potatoes and the Crops.—For some years the potatoes have not blossomed as they did previously. This was undoubtedly a premonitory symptom of the disease by which the tubers have been destroyed, and it has continued until the present year. Now the blossoms are nbundant—in some cases as much so as at any previous time. In connection with the healthy appearance of the vines we hail this as a most favorable omen, and regard it as of the more importance because the rot itself assumed last year a new character. We think we are fully justified in believing that this mysterious and important, though apparently insignificant failure will gradually cease from some causes as little known as those from which it originated. —*Buffalo Advertiser.*

Money Wasted.—A curious calculation was mentioned in the House of Representatives the other day. The expenses of the war with Mexico and the purchase of worthless territory, will be a hundred and seventy millions of dollars. This amount in silver, placed in two horse wagons, would fill ten thousand six hundred and twenty-five wagons, which would make a dense train extending sixty-six miles; money enough to educate all the children in the country, and liquidate all the State debts, and clean out every harbor, and chequer the United States with railroads and canals. And then there would have been enough left to purchase all the territory which we have already acquired.—*Farmer and Mechanic.*

MICHIGAN FARMER.

WARREN ISHAM, EDITOR.

PUBLISHED SEMI-MONTHLY—TERMS $1 IN ADVANCE—FIVE COPIES FOR $4.

Food of Plants.

We have in a series of articles, given some account of the elements, organic and inorganic which enter into the composition of plants, and which of course, must be found in every fertile soil. We will now add some particular illustrations, showing the necessity of adapting these elements, in their various proportions, to the demands of the particular kind of plant we may desire to cultivate.

And our first illustration is drawn from the fallow system generally followed by the wheat growers of Michigan? Why is it, that our farmers find it necessary to let their wheat lands rest and recruit every alternate year? Nothing is added to them in the shape of manure, and yet the soil is thus manifestly replenished with certain elements essential to the profitable culture of that cereal. Something has been drawn from the atmosphere it is true, in the shape of organic elements, which become incorporated with the soil, by plowing under whatever of vegetable growth may have been in the mean time produced. The advantage from this source, however, is scarcely appreciable, in comparison with that arising from the decomposition of the mineral portion of the soil. We have before shown that, about nine-tenths of the composition of ordinary soils, is derived from mineral origin, from the gradual crumbling away and decomposition of rocks. This is the "gritty" portion of the soil, and this "grit" consists of minute pieces of the parent rock, of which they once constituted a part, and is made up of the same elements which constituted its formation. Those elements, as we have had occasion to observe, are potash, soda, magnesia, lime &c., and exist in such combinations in these minnte portions of once solid rock, that their chemical decomposition, and subsequent necessary re-combination, in new form, is exceedingly slow. For thousands of years this process has been going on more or less rapidly according as circumstances facilitated or retarded it. And yet, whenever the elements which have been thus brought into a soluble state, a fit state to serve as food for plants, have become exhausted in the soil, or partially so, and the soil has thus been rendered comparatively barren, all that is necessary to restore its fertility, is to give the mineral elements still existing in great abundance in such soil, an opportunity for decomposition, under the influence of air and moisture. This is the philosophy of all improvement which results to the soil from lying fallow.

We are not now discussing the question whether this is the true system for the wheat grower. We do not believe it is. For while he recruits his land, to some extent, in this manner, the soil does not gain all that it had lost by the previous crop. Consequently, though it may thus be kept from running suddenly and totally down, it must exhibit constantly diminished fertility, from one crop to another.

Again, why is it, that soils composed of the richest mould, such as our river bottoms, are worthless for wheat? Why is it, that the immense burden of straw, which is produced upon such soils, droops and falls to the ground, and even where it stands upright, why is it that the kernel seldom but partially fills? Plainly, the straw droops and falls, because there is but little silica, (sand) in such a soil, which, as we have seen, forms in combination with potash, the stiffening for the straw. Such a soil, being composed of decayed vegetable matter, is of course destitute of this element. It is also destitute, to a great extent, as a matter of necessity of those mineral elements, such as lime, magnesia, phosphoric acid, &c., which enter into the composition of the kernel, and hence such a thing as a plump berry is not to be looked for as the product of such a soil.

And why is it that some kinds of pine delight in a barren, sandy soil, where no other tree would grow? A child ought to be able to answer this question. Who does not know, that the species of pine above alluded to, yields but very little ash, upon being burned, and that what it does yield, contains but little potash? What housewife ever undertook to make soap with the potash obtained from the ashes of the pine? What wonder then, that the pine flourishes in a soil where no other trees, which require three or four times as much potash, and, we might have added, other mineral elements, also, cannot grow?

XUM

We might go on to multiply illustrations on this point, to an indefinite extent. But every farmer's own experience will supply them in abundance. What can the farmer mean when he says of a certain piece of ground, that it is good wheat land, of another, that it is good corn land, of another, that it is good grass land, and of another, that is adapted to this, that, or the other kind of crop? What can he mean, if not that each particular crop which he names, will find the particular kind of food essential to its growth in the field, which he assigns to it, but would not find it, to the same extent, in the field which he assigns to another crop?

All this he learns from experience, often times dear bought experience. He also learns from experience, and if not from experience, at least from observation, that, after a series of years, he can no longer point to certain fields, and say of them as he used to, "*that* is good wheat land, *that* is good corn land, and *that* is good grass land," &c. And why? For the very good reason, that by an injudicious system of cropping, some of the elements essential to the growth and perfection of those particular crops to which the soil was so well adapted, have been exhausted, and need to be restored, either by artificial means, or by the slow process of disintegration of the mineral portion of the soil.

But how is he to determine what particular elements of the soil have been exhausted, whether this one or that, or the other? Here his experience avails him nothing, and without the light of science to guide him, he but gropes in the dark. To be sure, he can make use of manure which contains most of the elements contained in the soil, and among them all he may happen to hit upon the right one, while the rest are all thrown away.

To own the truth, however, this waste seems indispensable, in many instances, in the present state of things. For instance barn yard manure contains some dozen or more different substances, only a single one of which may be needed to restore fertility to an exhausted soil, while all the rest may already exist in it in great abundance and some of them even to excess, insomuch that this additional supply may in some instances, be absolutely injurious. If the farmer had the means of ascertaining precisely what element was wanting, in an exhausted soil, and had the means of separating the different substances contained in his manures, and could apply each one only where it was needed, the saving would be immense. And that practical agriculture will attain to this high stage of improvement, some day, we have little doubt. In the mean time the farmer must make the best of his present facilities, and feel his way in the dark as best he can. It is perhaps, on the whole, fortunate for him, in the existing state of things, that the manures on which he places his main dependance, are composed of such a variety of substances, for in such a wholesale application, he could hardly fail of giving to the soil, at least some one element which it needed.

☞We invite the special attention of our agricultural readers to the series of scientific articles which we have given them from time to time. In those articles we have taken pains so to develope the principles of agricultural chemistry, as to bring them within the scope of the common mind. And that none may think them the less worthy their attention, because they are written at the West, we would say, that they have been somewhat extensively copied into the Agricultural Journals at the East, of a standard character. We would further say, that we have been solicited to extend them into all the ramifications of the science, and finally revise and collect them into a volume. We say not these things, we trust, in the spirit of boasting, but to awaken attention to these articles, among those for whose benefit they are especially designed.

Respiration of the Earth.—In our article in regard to the absorption of the watery vapor of the atmosphere by the earth, we ought to have said, *and meant to have said*, that owing to the contracting influence of the cold at night the atmosphere, being compressed, a much greater portion of it, was absorbed into the earth than could possibly be absorbed during the day, under the expanding influence of the heat of the sun. Consequently a portion of what is absorbed in a compressed state, during the night is expelled during the day, as a necessary consequence of its expansion under the influence of the heat of the sun. And thus it is that the earth actually breaths, consuming only twenty-four hours in a breath, including both inspiration and expiration.

And as the air which is inhaled into the lungs undergoes a chemical change before it is exhaled

its oxygen uniting with carbon in the system and forming carbonic acid gas, so also is the atmosphere inhaled by the earth during the long inspiration of the night, chemically changed, before it is expired. The carbonic acid and ammonia, with which it was charged is left behind with the watery vapor. This, to be sure, is a mere physical change. But beyond this, much of the oxygen of the atmosphere unites chemically with the carbon of decaying vegetable matter and forms carbonic acid gas in the soil, which greatly increases its fertility. This is a process which does not admit of a question, and at the same time, it is not improbable, that the nitrogen which is set free in the process, unites with hydrogen and forms ammonia.

So important to vegetation, is the watery vapor of the atmosphere, which is thus inhaled by the earth, that in a drouth, vegetation could not exist without it, a benificent providence having made the atmosphere a great reservoir, charged with water, to a greater or less extent, according to the necessities of the earth, and kept in reserve to be drank in by it, as occasion may require, to allay its thirst.

Thus it appears, that the breathing of the earth is scarcely less essential to the life of vegetables, than that of animals is to the preservation of animal life.

We see the reason why vegetation is so much more affected by drouth upon clay than upon light porous soils. The more compact the earth the less of course, is the advantage from this source. Some kinds of clay are so compact as well nigh to exclude the atmosphere altogether.

Vermont State Agriculturist.—We have received the second number of the above, published at Burlington, Vermont, by Caspar T. Hopkins and D. W. C. Clark; Caspar T. Hopkins, editor—a monthly of 16 pages, quarto, at one dollar a year. It is ably conducted and will be quite an accession to the cause of agricultural science.

☞Otisco is welcome back to our columns. We trust the long silence of some of our other correspondents, will soon be broken—or is it the silence of the tomb?

As the busy season of the year is now getting pretty well along, we shall expect more liberal contributions from our agricultural friends. We want them to feel an honest and generous pride in contributing to the interest and usefulness of their own paper.

The Potatoe Disease, Remedies &c.

We continue to hear of the prevalence of this disease in different parts of the state, and the prospect seems to be any thing but cheering. The Owasso Argus, after speaking of the alarming prevalence of the disease in Shiawassee Co. adds, "in some instances, the farmers have cut the tops off, they are uncertain what will be the result of this experiment, but they say that something must be done, or the entire crop will be cut off."

There is no uncertainty at all as to the result of such an experiment, and had one single flickering ray from the light of agricultural science straggled into the pathway of those farmers, they would have known that the *unerring* result would have been, "*small potatoes.*" It is a law of the vegetable kingdom, throughout all its departments, a law as well ascertained as that which regulates the revolutions of the earth, that the greater part of all the organic matter which enters into the composition of plants, is derived from the atmosphere through the leaves. And this being the case, of course in proportion as you deprive a plant of its leaves, you cut off its appropriate supplies of nutriment, and a dwarf production is the necessary consequence. We gave an instance a short time since of an experiment of this kind having been made upon potatoe tops, the result of which was entirely in accordance with this view of the subject. The potatoes were so small as not to be worth harvesting. Suppose then, that by this expedient, you get sound potatoes, still, if they are so small as to be good for nothing, say, not more than one-fourth the usual size, what have you gained? We should infer however that the farmers in Shiawassee were slashing down their potatoe vines, after the potatoes were pretty well grown. If so, the result may possibly be more propitious. If this were done after the potatoes had attained their full size, it would be nearly identical, so far as results are concerned, with the practice spoken of by Otisco, as having been adopted by some farmers in Ionia co. viz, pulling out the tops and leaving the potatoes in the hill. But if the potatoes are fully ripe, the better way would be, one would think, to dig them at once.

The great remedy of Dr. Klotsch, of Germany of which there has been so much said, and for

which he received $14,00 from the government consists in pinching off a half inch of the tops of the shoots, when the plants are six to nine inches high. But this, instead of diminishing, actually increases the foliage, causing the plant to branch out in every direction, near the ground. This is said to have proved a very effectual remedy in Germany

For the Michigan Farmer.

The Potatoe Rot—Its Cause and Remedy.

Mr. Editor :—The *fears* expressed by you in a late number of the Michigan Farmer, in relation to the potatoe rot, are, I regret to say, in many parts of this county, becomeing *realities.* Of the fields which I have examined within the last few days, several are already considerably injured ; and many others present strong and unmistakable evidences that they too are its victims. That the *cause* and *remedy* still remain, at least to a very great degree, matters of serious speculation, is truly lamentable. He who discovers and promulgates the *regimen* necessary to be observed by this afflicted vegetable in order to shield it from this *potatoe cholera*, or ascertains and makes known an effectual and cheap remedy when so diseased, will confer a great boon, besides being strongly entitled to great and lasting gratitude. In a communication, bearing date July 24th, which I received from a brother residing in Oswego Co. N. York are contained some suggestions relative to the *cause*, which in my opinion, are worthy of favorable consideration—in fact, of having their correctness thoroughly tested by careful, well directed experiments. They are as follows :—"The potatoe rot" is yet in "*statu quo*," though it may be anticipated. Under the present system of culture, for one, I believe it incurable. It is consequent on too high and perfect cultivation of the vegetable itself. We have pushed the article beyond its *natural limits* altogether, so that its healthy organization has been destroyed, or at least materially injured. We must therefore plant upon poorer soil, and allow the entire class, with all its varieties, to degenerate until a more *natural* condition has been established. You may laugh at the idea, but I tell you that the time is coming when "small potatoes" and "few in a hill" will be all that can *safely* be achieved. At least, this is my opinion. The well known fact that potatoes, grown in a moist, rich soil, highly cultivated—and such a soil, so cultivated, is best adapted to a great yield, and will do most towards "pushing the article beyond its *natural* limits"—are much more likely to be diseased than those grown in a poor, dry soil, differently cultivated, very naturally and strongly inclines us to the opinion that, in the above quoted remarks, there is "more truth than poetry." That *avarice* will blindly "stub and brace" against reducing in her opinions, so unfavorable a theory to practice, I have no doubt ; but the severe pinchings of want, occasioned by entire and frequent losses of promising crops, will, after a while, be very likely to satisfy her that "a half-loaf is better than no bread."

A few words with regard to the remedy or remedies, and I am done.—They are numerous; but in my opinion, no one of them is infallible. Among them are pulverized charcoal, slacked lime and mowing the tops—the latter, a remedy accidentally discovered through the mischief of boys. Another—and it is one which I learned from a farmer in this county, who told me he had practised it with excellent success—is that of putting the feet close by the tops, when they come out of the ground, and pulling them out, leaving the potatoes in until time for harvesting them. This is done in the early stages of the "rot," and, as I was assured, will save all, not at the time affected.

August 15, 1848. Otisco.

For the Michigan Farmer.

Various Matters.

Kalamazoo, July 25th 1848.

Mr. Isham—Dear Sir :—Although I do not contemplate becoming a regular contributor or correspondent to your excellent paper, yet the desire to encourage others to "tell us what they know," induces me to write a little at this time, and should you think it worthy of your notice, please correct and print. And as I have been engaged in clearing up a new farm for some years past, perhaps I can do no better at this time than to give some of my fellow backwoodsmen a hint on this subject. And first I would say, go into the underbrush with an ax and brush scythe, and cut and pile all the brush and small limbs. This should be done in the month of August. Be particular to cut them close to the ground, then pass through your job and calculate where your large trees will fall to the best advantage ; after which, take your ax and grind it, chop all your big trees, cut and pile the brush, chop down the limbs, &c. Then fell the rest of the timber as near to your large trees as possible, and when they do not fall near enough to roll together whole, cut them short enough to be easily handled with one team. I make a practice of cutting all my small timber up to twelve inches through, close enough to the ground to clear the whippletrees drag or

plow, and think it pays ten-fold. In cutting timber near the ground right and left the side next to the workman will be considerably the highest. A few strokes with the ax will to considerable extent, remedy the evil. Having completed the whole in the above manner, let it remain until the next summer; then select a dry time to burn, it will then be fun for a backwoodsman to go in with four men and a good fat lively team, and roll the remains of the once huge forest together. When this is done, set fire to it and attend to it until it is consumed. Now it is fit for a crop of wheat.

Will the editor or some of your correspondents inform us through the Farmer, of the best, cheapest, and most convenient way of destroying green lice (as I call them) on fruit trees? My trees are very much infested with them. They inhabit the under side of the tender leaves and branches.

Lime and Ashes on Potatoes.

I think I have seen or heard lime and ashes recommended for the protection of potatoes against the rot, and have tried them by way of experiment as follows: I planted three rows, the first with lime, the next with unleached ashes, and the third without any thing. Those with lime look fine; those without any thing look well, and those with ashes look poor and did not half come up or grow. I put about one teacup full of ashes on the seed before covering, to each hill, and the same of lime on the other row. I do not recolect how the lime or ashes was to be applied. Perhaps in some other way the ashes would have been beneficial, but they certainly were not in this case. Will some one tell us through the Farmer the right way if there is one.* Also a few hints on the proper time and management of budding the various kinds of fruit, plums, cherries and peaches in particular, also the nectarine and appricot. Also how to propagate pears the best way on other stock.† I have already lengthened this more than I had intended. Perhaps I may venture something more hereafter should this not be rejected.

Yours respectfully.

SAMUEL JOHNSON.

*The ashes should not have been deposited directly upon the potatoes; a layer of earth should first have been drawn over them, then ashes, and then another layer of earth. Or it would do to put the ashes on the top of the hill. Their alkaline properties are too strong to be brought into immediate contact with the tuber, This would seem to have been the case in this instance from the fact, that the potatoes were so much injured that "they did not half come up." Otherwise the matter might have been left open for the conclusion, that while there was a deficiency of lime, there was a redundance of potash already in the soil, especially if there had been no marked effect one way or the other from its application. It is hardly time yet to ascertain the effect, either of the lime or the ashes in preventing the rot. [ED.

†We will endeavor to have something on this subject, either in this number or the next. ED.

For the Michigan Farmer.

Sweet Brier Hedge on Marshes.

To the Editor of the Michigan Farmer.

DEAR SIR:—A year ago last fall I had about ninety rods of ditch cut by James Herbert's Patent Ditching Machine, which throws but one furrow, apart of it through the centre of a large marsh. The next spring (a year ago last spring,) I sowed the furrow with sweet brier seed, having gathered the seed in the spring after it had hung on the bush through the winter to freeze. I took a shovel and pressed it into the furrow about two or three inches deep, in a line along the furrow, and worked it back and forth to leave a trench, and dropped the seed along in the trench and pated it down with the shovel. This last spring it came up, and now it is as flourishing a hedge as you would wish to see. It is now from a foot to eighteen inches high, and will undoubtedly, within three or four years, make an impregnable fence to any animal.

Yours &c. L. S. B.

LIBERTY Jackson Co. August 14th 1848.

Horticultural.

Below will be found an account of the last monthly exhibition of the Detroit Horticultural Society. It was nice, very nice. The fruits were nice, the peaches, and the plums, and the apples, and the pears, and the grapes, all nice. And the vegetables were nice too. The beets, and the carrots, and the tomatoes, and the egg plant, were nice, *very*, and O such cabbages! And were not the flowers nice too? Indeed they were—Solomon in all his glory was not arrayed like one of these, even the humblest of them all!

But we had almost forgotten to speak of the nicest of all those nice things, which was a moss vase, ornamented with evergreens, and surmounted with a cone, or pyramid of fruit of various descriptions, commencing with the larger kinds at the base, and terminating with the smaller ones in a point at the top.

And there were a great many nice people there, all in their best smiles. And there was a nice parcel of change went into the coffers

of the Society in the evening, from the avails of the sale.

Another thing still it would not be very nice in us to omit, viz a nice little present of fruit from the Society.

The names of the contributors, and a list of the premiums awarded, will be found below.

For the Michigan Farmer.

Horticultaral Exhibition.

The August Exhibition of the *Detroit Horticultural Society*, held on the 22nd inst. was a very satisfactory display, and well attended.

The collection of fruits was not so large as we had hoped to see, that of green house plants was small:—The display of vegetables more than usually large. The articles exhibited were as follows:

FLOWERS.

By A. C. Hubbard & Davis—Collection of dahlias, indigenous flowers, fox glove, tiger lily, petunia, balsams, &c.; By Wm. Adair—Collection and boquet of dahlias, altheas, hermosa, heavy plantin, and souvenir de malmaison Roses; By B. G. Stimson—Two boquets; By B. Briscoe—Boquet of dahlias; By Mrs. Dr. Cobb—Boquet; By Wm. Ford—Boquet; By J. C. Holmes—Fifty varieties of Dahlias, collection of cut flowers; By Mrs. Doty—Fushchia verbena, heliotrope; By Mrs. A. C. Hubbard—Chromatilla, yellow tea, and red perpetual roses; By P. Desnoyers—Seven dahlias; By Mrs. S Gillet—Boquet; By T. H. Hinchman—35 dahlias, boquet, tuberose very beautiful; By Mrs. Connor—Boquet; By W. Y. Patterson—China tea plant; By Mrs. J. L. King—Boquet;

VEGETABLES.

By John Ford—Celery, 3 heads, drumhead cabbage 3 heads, Valparaiso and crookneek squashes; By J. C. Holmes—Tomatoes, egg-plant, cauliflower, celery, victoria rhubarb; By John Winder—Cabbage, early york, 3 heads, silver skin onions from seed, carrots 3 bunches, Beets 6 bunches; By Rev. George Duffield—3 cabbages, 4 golden squashes, 1 doz. silver skin onions, from seed, 3 eggplants, and 3 specimens of seedling varieties of rhubarb; By J. E. Swartz—6 heads, drumhead cabbage; By H. Chipman—Tomatoes, sweet corn, beets; By Mr. Wisner—Two beets.

FRUITS.

By James Dougall of Amherstburgh C. W. a fine collection, consisting of 10 varieties of apples, viz: Alexander, American summer Pearmain, large yellow bough, red astrachan, hawthornden, keswick codlin, summer queen, goyean apple, Lymans large summer, ribston pippin.

Pears—Jargonelle English, Princes pear, 12 varieties of peaches, viz: early rose, early york, royal george, grosé mignone, early yellow rareripe, Barnard's early yellow, Dougals maroon seedling, malden maroon seedling, 4 other varieties of seedlings; 13 varieties plums, viz: washington, imperial gage, Prince's yellow gage, green gage, pond seedling, Mediterranean, early damson, 5 varieties seedlings, yellow gage, Warrington red goosberries in good preservation having remained on the bush since last monthly exhibition.

A collection of Dahlias, 1 hand boquet of roses containing, bourbon noisette, Bengal tea, boursalt &c. 1 boquet of quilled Germap asters, 1 boquet dwarf German asters, 3 boquets flowers.

By Bela Hubbard—seedling, French jargonelle pears; By J. C. Baughman—Mediterranean plums; By J. V. Campbell—Catharine (?) plum, black cluster and white sweetwater grapes from open ground; By Dr. Cobb—Smiths Orleans, Mediterranean and apricot plums, seedling and Murrays white peaches; By John Ford—early York peach, nutmeg cantilope and citron melons; By J. C. Holmes—pears for a name; By John Winder—Siberian crab apples very fine, Washington, green gage and Mediterranean plums; By James Williams—Mediterranean plums; By M. H. Webster—Duane's purple plums; By Mr. Oakley—black Spanish watermelon; By Dr. Duffield—seedling plums; By Mrs Jon. Kearsley—white mag um bonum and Princes yellow gage; By E. D. Lay Ypsilanti—summer rose, Dutchess of Oldenburgh, summer queen, golden sweating and sine qua non apples By Mrs. A. C. Hubbard Troy—a beautiful moss vase, supporting a pyramid of the following fruits: summer queen, strawberry, and Toole's Indian apples, Princes red rareripe, Columbia, Murray's July, and royal Kensington peaches, green gage plums; By P. Desnoyer—seedling plums, for a name; By Mrs. S. Gillet—Bleecker's gage, green gage, Princes Imperial gage and Mediterranean plums; By T. H. Hinchman—Mediterranean plums.

Premiums were awarded as follows:

FRUITS, for the best collection of apples, to J. Dougal, $1.00
For the second best collection apples, E. D. Lay. 50
For the best collection of Pears, B. Hubbard 1.00
" second best do do J. Dougal, 50
For the best single variety of Pears, B. Hubbard, 50
For the best collection of peaches, J. Dougal 1.00
" single variety " " J. Ford, 50
" seedling " " J. Dougal 25
" dish of nectarines do 50
" collection of plums do 1.00
For the 2d best do do Mrs. S. Gillet 50
For the third best collection of plums, Mrs. Jon. Kearsley, 25
For the best single variety of plums J. Winder, 25
For the 2d best variety plums M. H. Webster 25
For the best dish of grapes J. V. Campbell 50

VEGETABLES, for the best collection, J. Winder, 1.00
For the second best collection J. Ford, 50
For the best dozen tomatoes, J. C. Holmes, 25
" do do H. Chipman, 25
For the best 3 heads of cabbage, J. Winder 25
" 6 do do J. E. Schwartz 25
" purple eggplant, J. C. Holmes, 25
" celery do 25
" blood and turnip beets, J. Winder 25
" squashes, J. Ford 25
" do Dr. Duffield 25
" Doyle onions, J. Winder 25
" citron melon, J. Ford 25
" cantilope melon, do 25
" water do Mr. Oakley 25
" doz. carrots, J. Winder 25
" 3 specimens seedling rhubard, Dr. Duffield, 25
FLOWERS AND PLANTS, best collection of cut flowers, J. C. Holmes, 50
For the best collection of Dahlias W. Adair 50
" boquet, B. G. Stimson 50
For the 2d best do T. H Hinchman 25
For the best fuschia, Mrs. Doty 25
" tuberose, T. H. Hinchman 25
For a floral vase (with fruit) Mrs. A. C. Hubbard, 75
For a China tea plant, W. Y. Patterson 25

NEW INVENTIONS.

Important Invention in Mechanics.

The following sketch will give an idea of a machine, the model of which has been exhibited in Vicksburg, Mississippi. It is the invention of Mr. Jesse Andrews, of that State, and is designed to dispense with the use of the crank in all application of steam to machinery. It is stated that Mr. Andrews has devoted years of study and experiment in order to attain the end now reached:

"In the construction of this machine the crank, which is almost invariably used, and more especially in the propulsion of boats, is entirely dispensed with, and a strong chain of particular construction is used in its stead, with suitable machinery to operate on the chain, which produces all the motion that can possibly be produced by the use of a crank, and that motion, steady, smooth and regular, entirely free from the jarring and shaking produced by the revolutions of a crank, the power at all times being the same. There are no dead points to pass, and thus all the power created is advantageously employed, and with all possible ease and convenience. It is made to run either forward or backward, or put at a neutral point where it will not drive either way, and in that situation the steam can be worked off without any reference to any other machinery commonly used for that purpose. And it is immaterial whether, according to the common mode now in use, the steam be let into the cylinder for a forward or backward motion; for if in this invention the pistor. rod has its common motion, it is readily made to turn either way, rendering entirely useless a great deal of machinery connected with the cylinder for such purposes As there are no dead points, all the power created is constantly employed to the greatest possible advantage, in consequence of which much of the expense of machinery with its ponderous weight and great room necessarily occupied by it, with a large portion of fuel, &c., may be entirely dispensed with. In the use of this improvement there is no more room occupied in any respect, as it only occupies a small space between the head of the piston and the shaft of the water wheel. The whole of this invention is plain and simple, and no way complicated, and needs only to be seen to be approved of and brought into immediate use."—*Farmer and Mechanic.*

Telegraph by Sound.—An exchange paper states:—" We have just been called upon by a gentleman who has visited our city for the purpose, as he tells us, of testing an invention for conveying sounds to an almost unlimited distance at the same time retaining the articulation so perfectly that two men standing, the one in Norwich and the other in Boston, for instance, shall be able to converse with the same ease as if standing face to face. The very idea strikes one as almost preposterous; and yet the gentleman alluded to seems very confident of its entire practicability. He states that he has the necessary machinery now constructing in this city, and that, in a few days, it will be completed and ready to be subjected to the test of experiment. We shall then 'see what we shall see.' But until then, we shall maintain a position similar to that just now occupied by so many of our political friends here, and hereabouts, viz: a fence position."—*Farmer and Mechanic.*

Mechanics.—The working branches of our country are certainly in the ascendant. Their course, individually and as a body, is onward and upward. They compose the ruling power of our country, and the government is emphatically in their hands, and no purer or safer depository of power could exist. The idea that the few are born to govern the many is false, and can only be maintained in a monarchy. In our Republic, there is no distinction but that of merit. The provisional classes cannot overshadow the working community, for knowledge prevails among them both. Their interests are mutual, and not antogonistic. We are proud of our institutions for the reason that they carry out the truth that all men are born free and equal.—*Farmer and Mechanic.*

XUM

GENERAL INTELLIGENCE.

☞John P. Hale of New Hamshire, has withdrawn his name from the list of Presidential candidates, in favor of Martin Van Buren.

☞The Michigan Foundry, corner of Shelby and Lafayette streets, owned by Wm. Barclay Esq., giving employment to some 50 hands and turning out work to the amount of 70,000 annually, was consumed by fire on Tuesday night of last week, loss $12,000 to $14,000.

☞The Oregon bill with the Wilmot proviso attached was finally passed, and has become a law. The President stated in his message that he should have vetoed it, had the territory lain south of the Missouri compromise line, as do California and New Mexico. Congress adjourned on the 14th ult.

Ireland.—As we expected, the flaming account, which was published in our dailies, of the victories of the Irish arms turns out to be a hoax. The crisis has passed, O'Brien has been arrested and is in jail in Dublin, and numerous other arrests are being made. The insurrection appears to be effectually suppressed. There was manifestly neither concert nor preparation on the part of the insurgents.

Italy.—The legations have broken out in open insurrection against the Pope. At Bologna a provisional government had been formed. Another advantage had been obtained by the Piedmontese over the Austrians. 20,000 of the latter made a sortie from Verona. The advanced guard of 3600 men allowed itself to be surrounded by two Piedmontese brigades, and was oblidged to lay down their arms. A general engagement took place, in which the 17,000 Austrians were defeated. Another sortie, made by the Austrians numbering 7000, from Mantua was repulsed by 4000 Roman and Tuscan troops Verona, it was said, was to be bombarded on the 19th.

England.—There is a prospect of a very small crop of fruit this year, and of apples and pears the failure will be considerable. This will leave an opening for the exportation of American apples, which in this country are considered a great luxury, and an ornament of the dessert table.

Albany has been the scene of an awful conflagration—the largest which has afflicted any part of America for several years. One-eighth of the city, embracing an area of 35 acres. and this in the very heart of its business, lies in ruins. Many have of course lost all their wordily possessions, and some Insurance Companies must be ruined. The total loss is estimated at Two Millions of dollars.

The fire, says the Albany Knickerbocker, originated in a very singular manner. It appears that while a woman was washing, a spark set fire to her sun-bonnet. Without a moment's thought, she jurked it from her head, and threw it she knew not where; unfortunately, it alighted in the stable of Mr. Wm Johnson, which in a moment almost, was enveloped in flames

The estimated amount of loss continues to advance, and is now set down at 3,000.000. Wm. Johnson, 31 Liberty st. was burnt to death; a man named John Harkley died of exhaustion, and it is generally believed that two or three other lives are lost. Upwards of twenty people are missing. The flour destroyed was mostly on the pier of the Swiftsure line, who are heavy losers. Sixty or eighty thousand dollars are lost by the destruction of barges, flour, &c. The steamboats had barely time to fire up and make their escape. A number of emigrants are supposed to have been drowned while escaping from the boats. Five hundred houses and one hundred canal boats are reported to be destroyed. Many of the largest mercantile houses are destroyed. One account estimates the loss as high as $5,000,000, and says that one quarter of the city is destroyed.

☞A Free Soil convention has been recently held at Baltimore, which nominated Presidential electors for the slave state of Maryland.

Italy, Great Battle—Defeat of Charles Albert—There has been a long and close battle between the Austrians and the Piedmontese, and victory has finally declared for Radetzky, who has succeeded in effecting the object he had in view, and in forcing Charles Albert to retire beyond the Mincio. On the 23d the Austrians were completely victorious. They swept the whole country before them. On the 24th they were attacked by the Piedmontese, and driven farther, leaving 2,500 prisoners in the hands of the Italian army. On the 25th the battle was renewed, and continued until night, when the Piedmontese army retired in good order, taking with them their prisoners. The head quarters of Charles Albert were, on the 26th, at Goito. A dispatch states that the Provisional Government having been broken up, Charles Albert by the wish of the people, had been proclaimed Dictator.

DETROIT PRICE CURRENT.

Flour, bbl.		$4 43		Salt,		$1 25	a	$1 50
Corn, bus.		a 40		Butter,		9	a	10½
Oats,		a 35		Eggs, doz.				7
Rye,		a 42		Hides, lb.		3	a	6½
Barley,		56 a		Wheat, bus.				85
Hogs, 100 lbs.	3 00	a 3 50		Hams, lb.		6	a	6½
Apples, bush	25	a 0 50		Onions, bu.		41	a	50
Potatoes,		25		Cranberries,			a 1	25
Hay, ton,	8 00	a 10 00		Buckwheat 100 lbs.			1	50
Wool, lb.	14	a 28		Indian meal, "			1	00
Peas, bu,		a 75		Beef, do	3 50	a	4	50
Beans,	75	a 80		Lard, lb. retail,				7
Beef, bbl.	00	a 7 00		Honey.				10
Pork,	10 50	a11 50		Apples, dried,			1	00
White fish,	6 00	a 7 00		Peaches, do			a 2	00
Trout,	5 50	a 6 50		Clover seed, bu.			4	50
Cod fish, lb.	5	a 5½		Herd's grass do	do		1	00
Cheese,	6	a 8		Flax	do			75
Wood, cord,	2 25	a 2 50		Lime, "	bbl			75

Educational Convention.

The North Western Educational Convention was held in this city on the 16th and 17th ult. Delegates were present from Michigan, Ohio, Illinois, Wisconsin, New York, Pennsylvania, Rhode Island and Connecticut. Rev. Dr. Duffield was appointed President of the Convention. Dr. Z. Pitcher, Vice President, James L. Enos, Secretary, and Alexander McFarren, Treasurer.

The Society was organized at Chicago, in October, 1846, the avowed object being to concentrate the energies of the active friends of education in the Northwest, in well directed and systematic efforts to carry out the spirit of that part of the celebrated ordinance of '87, which says: 'Religion, morality and knowledge being necessary to good government, and the happiness of mankind, schools, and the means of education, shall forever be encouraged.'

The first anniversary of the society was held in Milwaukie, in July, 1847, its second in Detroit as above stated, and its third is to be held in Cleveland on the 2nd Wednesday in August, 1849. The society is composed of teachers and friends of education living in various parts of the Union.

Resolutions were introduced, discussed and adopted, setting forth the claims of the *Free School System* to the support of the government, in favor of the introduction of *Union schools* in villages and densely populated parts of the country, in favor of the establishment of *Normal schools*, or schools for the education of teachers as a part of the common school system—also in favor of the organization of *Teachers' Institutes*, and one inviting the Legislatures of the states in the Northwest to the importnace of Teachers Institutes, and their claims to Legislative aid Resolutions were also presented and adopted in regard to the importance of the proper construction, finishing and furnishing, ventilation and cleanliness of school rooms, recommending the reading of portions of scripture without note or comment, at the morning opening of schools, and in favor of the introduction of vocal music into schools. The discussions were animated, able, and often eloquent.

Our New Territory.—Oregon is said to contain 218,536,230 acres; California and New Mexico contain 500,000 square miles. These and the other territories of the Union equal at least 1,600,000 miles or 260,000,000 square acres.

TERMS.—The Michigan Farmer is published at Detroit, twice a month, by Warren Isham, at one dollar a year in advance—after three months $1 25—after six months $1 50—after nine months $1 75. No subscription taken for less than one year, nor discontinued till all arrerages are paid. To clubs, five copies for four dollars.

Office, on King's corner, third story.

Improved Railroad Portable Horse Powers, and Over-shot Threshing Machines and Separators.—Having sold upwards of seventy setts of the above celebrated machines the past season, and to many large farmers in this state, Vermont, Massachusetts, Michigan, Ohio, Ilinois, Wisconsin, Canada, and with entire satisfaction in every case, the subscriber would call the particular attention of farmers and mechanics desiring such machines, before purchasing—as he is prepared to offer a better finished article, with some slight improvements, at a less price, than before—for full particulars, description, &c, see catalogue, furnished gratis at the warehouse, Number 10 and 12, Green street, Albany, or by mail to those desiring them. Horace L. Emery.

DETROIT SEED STORE AND AGRICULTURAL WAREHOUSE.—In compliance with the expressed wish of a great number of the intelligent and enterprising farmers of Michigan, the subscribers have established *a seed store and agricultural warehouse* at Detroit, at which will be kept constantly on hand, the choicest varieties of garden, field and flower seeds, obtained from such sources, that they feel no hesitation in recommending them to be of the very best quality. Also, Agricultural and Horticultural implements and labor-saving machines, such as are usually kept at the agricultural warehouses at the East, among which are Pratt's Patent corn-planter and seed drill, Pennock's patent drill (for drilling in wheat and other small grain,) Pitt's thrashing machine, improved harrow, improved cultivator, a great variety of plows, corn shellers, straw cutters and washing machines of the most approved kinds, together with Rich's Beehive, Montgolphier's Hydraulic Ram, Grant's Fanning Mill, Camwheel Churn, &c.

At Nos. 93 and 95 Woodward Avenue, nearly opposite the National Hotel.

F. F. PARKER & BROTHER.

SELLING OFF.

LINNÆAN BOTANIC GARDEN AND NURSERY. Late of William Prince, deceased, Flushing, Long Island, near New York. Winter & Co., Proprietors. In consequence of the decease of the Junior, and of the advanced age of the surviving partner who therefore intends to relinquish the business, the entire stock of this establishment, comprising every description including the newest and choicest varieties, of Fruit and Ornamental Trees, Shrubs, Vines and Plants, Roses, Greenhouse Plants, Box Edging, etc., will be disposed of in lots to sut purchasers, at very reduced prices, in order to close the business as speedily as possible. Orders accompanied with the cash, to the amount of ten dollars or upwards, will be supplied at a reduction of 25 per cent from the usual prices. Nurserymen, Venders, and others, wishing to purchase *by wholesale*, will be supplied at such *reduced prices* according to quality and quantity, as will probably prove satisfactory to them. Young stock, both in the Fruit and Ornamental departments, supplied *very low* by the quantity. An opportunity is afforded to Amateurs and Nurserymen to obtain extra sized and many new and rare Specimen Fruit and Ornamental Trees, Shrubs and Plants, at very moderate prices. Extra sized Ornamental and Shade Trees for Streets, Lawns and Parks, *low*.

The establishment, now in the highest order and densely stocked, will be disposed of upon liberal terms, offering from its location, celebrity, saleable stock, greenhouses, dwellings, and other conveniences for conducting the business, very superior advantages to any person disposed to pursue it. It is requested that letters of inquiry, &c. be *post paid*. Descriptive Catalogues *gratis*.

August 1st 1848.